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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/659,448

09/11/2000

Motohide Takeichi

Yanagihara Case 52

5818

7590

09/23/2004

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EXAMINER

GRAYBILL, DAVID E

ART UNIT

PAPER NUMBER

2822

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/659,448

Applicant(s)

TAKEICHI ET AL.

Examiner

David E Graybill

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,6-13 and 18-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20 and 21 is/are allowed.
- 6) ☒ Claim(s) 3,6-13,18 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 10-13 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Specifically, in the remarks filed 5-24-4, applicant states, "it is a critical part of the present invention that the connecting material contain from 6-90% by weight of a microparticulate elastomer product selected from the group consisting of natural rubber, isoprene rubber, butadiene rubber, styrene/butadiene rubber, chloroprene rubber and acrylonitrile/butadiene rubber having an average particle size of from 30-300 nm." However, claims 10-13 fail to recite an average particle size of from 30-300 nm. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the

time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3, 6, 8-13 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomita (WO98/44067) (with reference to English translation equivalent EP0979854).

As cited in EP0979854, at paragraphs 0010, 0013, 0015, 0016, 0019, 0059-0062, 0071, 0072, 0074-0083, 0089, 0091, 0094, 0096, 0100, 0106-0118, 0120, 0124, 0126, 0127, 0135, 0136, 0140 and 0150, Tomita discloses most of the claim limitations.

To further clarify, Tomita discloses 0% by weight of a thermoplastic polymeric substance.

Also, the disclosure of Tomita of, "a modulus of elasticity of from 100 to 2,000 MPa, and more, preferably from 1,000 to 1,800 MPa, at 40°C after curing," anticipates the claimed modulus. Moreover, the particular claimed elastic modulus is an inherent property of the instant claimed product and the identical product of Tomita. Indeed, in the response filed on 5-24-4, at page 7, last paragraph, applicant concedes this disclosure.

Further, the particular claimed T_g limitation is an inherent property of the instant claimed product and the identical product of Tomita.

In addition, Tomita teaches the elastomer product of natural rubber at paragraph 0060.

However, Tomita does not appear to explicitly disclose 10-94% by weight of an epoxy resin.

Regardless, at paragraph 120, Tomita discloses 20% by weight of an epoxy resin "epoxy-group-containing acrylic copolymer (acrylic rubber)". In addition, at paragraph 60, Tomita discloses that "any elastomers so long as they are those having a . . . epoxy group," including butadiene-acrylonitrile, are equivalent to epoxy-group-containing acrylic copolymers. Therefore, it would have been obvious to substitute the claimed elastomers, including butadiene-acrylonitrile having an epoxy group, for the epoxy-group-containing acrylic copolymer of Tomita, to provide 20% by weight of epoxy resin.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tomita as applied to claim 9 *supra*, and further in combination with Yamada (JP407197001).

Tomita does not appear to explicitly disclose wherein the COG assembly is a liquid crystal display.

Nonetheless, in the English abstract and figures, Yamada discloses this product. Moreover, it would have been obvious to combine the product of Yamada with the product of Tomita because it would provide a COG assembly.

Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomita as applied to claims 18 and 19 *supra*, and further in combination with Satsu (20010053448).

Tomita does not appear to explicitly disclose the particular claimed Tg.

Notwithstanding, at paragraphs 0005, 0016, 0020, 0024, 0049, 0060-0068 and 00127, and Table I, Satsu discloses the particular claimed Tg. In addition, as cited, Tomita discloses that properties related to and resulting from Tg are obtainable by routine optimization and experimentation. Hence, it would have been obvious to combine the disclosure of Satsu with the disclosure of Tomita to provide the adhesive of Tomita with the Tg of Satsu by routine optimization and experimentation because it would minimize cracking.

Also, Tomita does not appear to explicitly disclose the particular claimed elastic modulus.

However, as cited, both Tomita and Satsu disclose that elastic modulus is a result effective variable. Furthermore, it would have been an obvious matter of design choice bounded by well known manufacturing

constraints and ascertainable by routine experimentation and optimization to choose the particular claimed elastic modulus limitation because applicant has not disclosed that the limitation is for a particular unobvious purpose, produces an unexpected result, or is otherwise critical, and it appears prima facie that the product would possess utility using another elastic modulus. Indeed, it has been held that optimization of range limitations are prima facie obvious absent a disclosure that the limitations are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical. See MPEP 2144.05(II): "Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. '[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.'" In re Aller, 220 F.2d 454, 105 USPQ 233, 235 (CCPA 1955). See also In re Hoeschele, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969), Merck & Co. Inc. v. Biocraft Laboratories Inc., 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989), and In re Kulling, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990). As set forth in MPEP 2144.05(III), "Applicant can rebut a prima facie case of obviousness based on overlapping ranges by showing the criticality of the claimed range. 'The law is replete with cases in which the

difference between the claimed invention and the prior art is some range or other variable within the claims. . . . In such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range.' In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP § 716.02 - § 716.02(g) for a discussion of criticality and unexpected results."

Applicant's amendment and remarks filed 5-24-4 have been fully considered, are addressed by the rejections *supra*, and are further addressed *infra*.

Applicant argues that "the connecting material contain from 6-90% by weight of a microparticulate elastomer product selected from the group consisting of natural rubber, isoprene rubber, butadiene rubber, styrene/butadiene rubber, chloroprene rubber and acrylonitrile/butadiene rubber having an average particle size of from 30-300 nm" are critical limitations. This argument is respectfully traversed because applicant originally disclosed, presently discloses (see, for example, the abstract), originally claimed, and presently claims (see, for example, claims 10-13) an embodiment of the invention not limited to the allegedly critical limitations. Indeed, the claims were amended to include the allegedly critical limitation only after several office actions rejecting the claims, and as indicated in MPEP 2164.089(c), "Broad language in the disclosure, including the abstract,

omitting an allegedly critical feature, tends to rebut the argument of criticality."

In any case, it is respectfully submitted that criticality must be established by factual evidence, and not, as here, by mere argument. See, for example, *In re De Blauwe*, 736 F.2d 699, 222 USPQ 191, 196 (Fed. Cir. 1984), and MPEP 716.02(d), "Demonstrating Criticality of a Claimed Range." To establish unexpected results over a claimed range, applicants should compare a sufficient number of tests both inside and outside the claimed range to show the criticality of the claimed range. *In re Hill*, 284 F.2d 955, 128 USPQ 197 (CCPA 1960). To this end, the arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). Instead, the evidence relied on should establish "that the differences in results are in fact unexpected and unobvious and of both statistical and practical significance." *Ex parte Gelles*, 22 USPQ2d 1318, 1319 (Bd. Pat. App. & Inter. 1992). See also, *Ex parte C*, 27 USPQ2d 1492 (Bd. Pat. App. & Inter. 1992); *In re Nolan*, 553 F.2d 1261, 193 USPQ 641, 645 (CCPA 1977); and *In re Eli Lilly*, 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990).

Also, applicant alleges that the claimed invention has unexpected results over the instant Comparative Examples. This allegation is respectfully deemed to be unpersuasive because the prior art is not applied

in the rejections for disclosure of the Comparative Examples. Moreover, it is respectfully submitted that unexpected results must be established by factual evidence, and not by mere argument. See, for example, *In re De Blauwe*, 736 F.2d 699, 222 USPQ 191, 196 (Fed. Cir. 1984), and MPEP 716.02(d), "Demonstrating Criticality of a Claimed Range To establish unexpected results over a claimed range, applicants should compare a sufficient number of tests both inside and outside the claimed range to show the criticality of the claimed range. *In re Hill*, 284 F.2d 955, 128 USPQ 197 (CCPA 1960). To this end, the arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). Instead, the evidence relied on should establish "that the differences in results are in fact unexpected and unobvious and of both statistical and practical significance." *Ex parte Gelles*, 22 USPQ2d 1318, 1319 (Bd. Pat. App. & Inter. 1992). See also, *Ex parte C*, 27 USPQ2d 1492 (Bd. Pat. App. & Inter. 1992); *In re Nolan*, 553 F.2d 1261, 193 USPQ 641, 645 (CCPA 1977); and *In re Eli Lilly*, 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990).

Also, applicant posits, "'tensile elongation percentage' and 'modulus of elasticity' are two different properties and are not necessarily related to each other. Therefore, the Tomita reference does not disclose the claimed tensile elongation percentage."

This is respectfully deemed unpersuasive because the rejection does not maintain that tensile elongation percentage and modulus of elasticity are identical properties and related to each other.

Similarly, applicant proffers, "since the compositions of the connecting materials of Tomita and that of the present invention are different, it is not inherent that both compositions would have the same tensile elongation percentage."

This is respectfully traversed because, as set forth in the rejection, Tomita discloses the claimed invention.

Claims 20 and 21 are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2827

For information on the status of this application applicant should check PAIR:

Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alternatively, applicant may contact the File Information Unit at (703) 308-2733. Telephone status inquiries should not be directed to the examiner. See MPEP 1730VIC, MPEP 203.08 and MPEP 102.

Any other telephone inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Graybill at (571) 272-1930. Regular office hours: Monday through Friday, 8:30 a.m. to 6:00 p.m.
The fax phone number for group 2800 is (703) 872-9306.



David E. Graybill
Primary Examiner
Art Unit 2827

D.G.
7-Sep-04